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Vlad Stirbu

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EXAMINER

AGA, SORI A

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/587,979	<b>Applicant(s)</b> STIRBU ET AL.	
	<b>Examiner</b> SORI A. AGA	<b>Art Unit</b> 2476	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 16-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>07/09/2009, 11/20/2009</u> . | 6) <input type="checkbox"/> Other: _____  |

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## **DETAILED ACTION**

### ***Response to Amendment***

Applicant's amendments and accompanying remarks mailed 07/09/2009 have been received and carefully considered. Claims 16 and 18-35 have been amended. New claim 36 has been added and claims 1-15 have been previously cancelled. Claims 16-36 are now pending.

### ***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 32-34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter (computer readable storage medium). A claim drawn to such a computer readable medium that covers both transitory and non-transitory embodiments may be amended to narrow the claim to cover only statutory embodiments to avoid a rejection under 35 U.S.C. § 101 by adding the limitation "non-transitory" to the claim.

### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 16-18, 21-25, 28, 29, 31, 32, 34 and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Rune et al. (US PGPUB 2004/0167988 A1) (herein after Rune).

***Regarding claim 16***, Rune teaches a method comprising [see paragraphs 0068, 0069, 0071 and figs. 8-10 where a system and method for bridging a

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**Bluetooth scatternet and an Ethernet LAN is shown]:**

checking a destination address of a received packet by an intermediate node configured to arrange data transmission between a first device and a second device in a local area networking system, wherein at least the second device is configured to multicast and/or broadcast messages [see **paragraph 0145 where a Network Access Point -herein after 'NAP' (the claimed intermediate node) is shown to forward packets between the Bluetooth scatternet and the LAN; see paragraph 0196 where when broadcast packets are received, packet filtering is performed based on the destination address of the packet];**

comparing the destination address of the packet with at least one predetermined multicast and/or broadcast address and preventing in the system the transmission of the packet to the first device if the addresses match [see **paragraph 0210 where a broadcast ARP request, encapsulated ARP-route request or ARP route request is received at the NAP and where the request contains target IP address and where the address filtering function contained within the NAP determines whether the address corresponds to an address that is stored in the ARP cache; and where the packet is passed to the NAP-B (i.e. forwarded to the scatternet from the LAN) unless that is not addressed to the NAP itself or the address function determines from the address table that the destination node is located on the receiving side -i.e. the side from which the broadcast packet is received];**

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wherein multicast messages from the first device are forwarded by the intermediate node [see **paragraph 0214 where broadcast ARP replies received from the scatternet (from the first device) are always passed by the address filtering function (i.e. the NAP) to the NAP-B because network resource is not an issue in the LAN side (second device)**].

*Regarding claim 17*, Rune teaches the method as claimed in claim 16, wherein the intermediate node is configured to connect networks that use different data transmission protocols [see **paragraphs 0068 and 0069 and fig. 9 where a Network Access Point is used for bridging a Bluetooth scatternet and an Ethernet LAN (different data transmission protocols)**].

*Regarding claim 18*, Rune teaches a method as claimed in claim 16, wherein the destination address is an Internet Protocol address [see **paragraph 0210 where a broadcast ARP request, encapsulated ARP-route request or ARP route request is received at the NAP and where the request contains target IP (Internet Protocol) address**].

*Regarding claim 21*, Rune teaches a system comprising: a first device; a second device; and an intermediate node configured to arrange data transmission between the first device and the second device [see **paragraphs 0068, 0069, 0071 and figs. 8-10 where a system and method for bridging a Bluetooth scatternet and**

**an Ethernet LAN is shown where a source device and destination device communicate through the NAP (intermediate node)];**

wherein at least the second device is configured to multicast and/or broadcast messages to devices in the system [see paragraphs 0144 and 0145 where a **Network Access Point -herein after ‘NAP’ (the claimed intermediate node) is shown to forward packets from the LAN to Bluetooth scatternet and where the packets are broadcast packets]**, wherein the system is configured to check the destination address of a received packet, the system is configured to compare the destination address of the packet with at least one predetermined multicast and/or broadcast address, wherein the system is configured to prevent in the system the transmission of the packet to the first device if the addresses match [see paragraph 0210 where a **broadcast ARP request, encapsulated ARP-route request or ARP route request is received at the NAP and where the request contains target IP address and where the address filtering function contained within the NAP determines whether the address corresponds to an address that is stored in the ARP cache; and where the packet is passed to the NAP-B (i.e. forwarded to the scatternet from the LAN) unless that is not addressed to the NAP itself or the address function determines from the address table that the destination node is located on the receiving side -i.e. the side from which the broadcast packet is received]**, and wherein the system is configured to forward multicast messages from the first device [see paragraph 0214 where **broadcast ARP replies received from the scatternet (from the**

**first device) are always passed by the address filtering function (i.e. the NAP) to the NAP-B because network resource is not an issue in the LAN side (second device)].**

*Regarding claim 22*, Rune teaches an apparatus [see fig. 9 where a Network Access Point -herein after 'NAP' (apparatus) is shown] comprising a processor configured to check the destination address of a received packet [see paragraph 0145 where a Network Access Point -herein after 'NAP' is shown to forward packets between the Bluetooth scatternet and the LAN; see also paragraphs 0079 and 0247 where a packet filtering function (processor) determines whether to block or forward packets ], wherein the apparatus comprises an intermediate node configured to arrange data transmission between a first device and a second device in a local area networking system; compare the destination address of the packet with at least one predetermined multicast and/or broadcast address, and prevent the transmission of the packet in the system to the first device if the addresses match [see paragraph 0210 where a broadcast ARP request, encapsulated ARP-route request or ARP route request is received at the NAP and where the request contains target IP address and where the address filtering function contained within the NAP determines whether the address corresponds to an address that is stored in the ARP cache; and where the packet is passed to the NAP-B (i.e. forwarded to the scatternet from the LAN) unless that is not addressed to the NAP itself or the address

**function determines from the address table that the destination node is located on the receiving side -i.e. the side from which the broadcast packet is received], wherein the apparatus is configured to forward multicast messages from the first device [see paragraph 0214 where broadcast ARP replies received from the scatternet (from the first device) are always passed by the address filtering function (i.e. the NAP) to the NAP-B because network resource is not an issue in the LAN side (second device)].**

*Regarding claim 23*, Rune teaches the method as claimed in claim 22, wherein the intermediate node is configured to connect networks that use different data transmission protocols [see paragraphs 0068 and 0069 and fig. 9 where a **Network Access Point is used for bridging a Bluetooth scatternet and an Ethernet LAN (different data transmission protocols)]**].

*Regarding claim 24*, Rune teaches the apparatus according to claim 23 wherein the apparatus is configured to perform data transmission between an IEEE 802-based network to which the second device belongs and a Bluetooth network to which the first device belongs [see paragraphs 0068 and 0069 and fig. 9 where a **Network Access Point is used for bridging a Bluetooth scatternet and an Ethernet LAN (IEEE 802 based network)]**].

***Regarding claim 25***, Rune teaches the apparatus according to claim 22, wherein the destination address is an Internet Protocol address [see **paragraph 0210 where a broadcast ARP request, encapsulated ARP-route request or ARP route request is received at the NAP and where the request contains target IP (Internet Protocol) address**].

***Regarding claim 28***, Rune teaches the apparatus according to claim 22, wherein the data processor configured to check, in addition to the comparison of the destination address of the packet with at least one predetermined multicast and/or broadcast address, if the packet complies with one or more further message transmission conditions, and the processor is configured to allow forwarding of the message to the first device in response to the message complying with the one or more further message transmission conditions [See **paragraph 0196 lines 10-21 where packet filtering is based on destination address and NAL packet type and based on higher layer protocols (one or more further message transmission conditions)**].

***Regarding claim 29***, Rune teaches an apparatus [see **fig. 9 where a Network Access Point -herein after ‘NAP’ (apparatus) is shown**] comprising: a processor configured to check a destination address of a received packet, compare the destination address of the packet with at least one predetermined multicast

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and/or broadcast address, and prevent transmission of the packet to a first device if the addresses match [see **paragraph 0145** where a **Network Access Point** - herein after 'NAP' is shown to forward packets between the Bluetooth scatternet and the LAN; see also paragraphs 0079 and 0247 where a packet filtering function (processor) determines whether to block or forward packets; See also paragraph 0210 where a broadcast ARP request, encapsulated ARP-route request or ARP route request is received at the NAP and where the request contains target IP address and where the address filtering function contained within the NAP determines whether the address corresponds to an address that is stored in the ARP cache; and where the packet is passed to the NAP-B (i.e. forwarded to the scatternet from the LAN) unless that is not addressed to the NAP itself or the address function determines from the address table that the destination node is located on the receiving side -i.e. the side from which the broadcast packet is received ], wherein the apparatus is configured to forward multicast messages from the first device [see **paragraph 0214** where broadcast ARP replies received from the scatternet (from the first device) are always passed by the address filtering function (i.e. the NAP) to the NAP-B because network resource is not an issue in the LAN side (second device)]

*Regarding claim 31*, Rune teaches the apparatus according to claim 29, wherein the processor is configured to compare one or more properties of the message to

properties specified in predetermined transmission conditions to determine whether the message should be transferred to the first device [see **paragraph 0210 where a broadcast ARP request, encapsulated ARP-route request or ARP route request is received at the NAP and where the request contains target IP address and where the address filtering function contained within the NAP determines whether the address corresponds to an address that is stored in the ARP cache; and where the packet is passed to the NAP-B (i.e. forwarded to the scatternet from the LAN) unless that is not addressed to the NAP itself or the address function determines from the address table that the destination node is located on the receiving side -i.e. the side from which the broadcast packet is received].**

*Regarding claim 32*, Rune teaches a computer readable storage medium storing a computer program [see **paragraph 0077 lines 14-20 where a NAP is implemented on a software (computer readable storage medium), hardware or a combination of both**], the computer program configured to control a processor to perform the following: checking a destination address of a received packet, comparing the destination address of the packet with at least one predetermined multicast and/or broadcast address; preventing transmission of the packet in the system to a first device if the addresses match; and forwarding multicast messages from the first device [see **paragraph 0210 where a broadcast ARP request, encapsulated ARP-route request or ARP route**

**request is received at the NAP and where the request contains target IP address and where the address filtering function contained within the NAP determines whether the address corresponds to an address that is stored in the ARP cache; and where the packet is passed to the NAP-B (i.e. forwarded to the scatternet from the LAN) unless that is not addressed to the NAP itself or the address function determines from the address table that the destination node is located on the receiving side -i.e. the side from which the broadcast packet is received].**

*Regarding claim 34*, Rune teaches a computer readable storage medium according to claim 32, wherein the computer program is further configured to control the processor to compare one or more properties of the message to properties specified in predetermined transmission conditions to determine whether the message should be transferred to the first device [see paragraph 0210 where a broadcast ARP request, encapsulated ARP-route request or ARP route request is received at the NAP and where the request contains target IP address and where the address filtering function contained within the NAP determines whether the address corresponds to an address that is stored in the ARP cache; and where the packet is passed to the NAP-B (i.e. forwarded to the scatternet from the LAN) unless that is not addressed to the NAP itself or the address function determines from the address table that the

**destination node is located on the receiving side -i.e. the side from which the broadcast packet is received].**

*Regarding claim 35*, Rune teaches an apparatus comprising: means for checking a destination address of a received packet; means for comparing the destination address of the packet with at least one predetermined multicast and/or broadcast address, means for preventing transmission of the packet in the system to a first device if the addresses match [see paragraph 0210 where a broadcast ARP request, encapsulated ARP-route request or ARP route request is received at the NAP and where the request contains target IP address and where the address filtering function contained within the NAP determines whether the address corresponds to an address that is stored in the ARP cache; and where the packet is passed to the NAP-B (i.e. forwarded to the scatternet from the LAN) unless that is not addressed to the NAP itself or the address function determines from the address table that the destination node is located on the receiving side -i.e. the side from which the broadcast packet is received]; and means for forwarding multicast messages from the first device [see paragraph 0214 where broadcast ARP replies received from the scatternet (from the first device) are always passed by the address filtering function (i.e. the NAP) to the NAP-B because network resource is not an issue in the LAN side (second device)].

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 19,20,26,27,30 and 33 rejected under 35 U.S.C. 103(a) as being unpatentable over Rune as applied to claims 16-18, 21-25, 28,29,31, 32,34 and 35 above and further in view of Vasisht (US 2004/0133689).

***Regarding claim 19***, Rune teaches a method as claimed in claim 16 as discussed above. However, Rune does not explicitly teach the first device belongs to a Mobile Handheld Subcommittee domain of a Universal Plug and Play system and the second device belongs to a Home Network version 1 domain of the Universal Plug and Play system. However, Vasisht teaches using UPnP in one of the networks [paragraph 0051 line 24]. It would have been obvious for a person having ordinary skill in the art to utilize UPnP (various versions include MHS and Home network version) in one of the networks. UPnP (both the Home network and MHS versions) is desirable because it allows devices to connect seamlessly.

*Regarding claim 20*, Rune teaches a method as claimed in claim 19 including preventing multicast messages to the first device as discussed above. However, Rune does not explicitly teach Universal Plug and Play-UPnP. However, Vasisht teaches using UPnP in one of the networks [paragraph 0051 line 24]. It would have been obvious for a person having ordinary skill in the art to utilize UPnP in one of the networks. UPnP is desirable because it allows devices to connect seamlessly.

*Regarding claim 26*, Rune teaches the apparatus according to claim 22 as discussed above. However, Rune does not explicitly teach the first device belongs to a Mobile Handheld Subcommittee domain of a Universal Plug and Play system and the second device belongs to a Home Network version 1 domain of the Universal Plug and Play system. However, Vasisht teaches using UPnP in one of the networks [paragraph 0051 line 24]. It would have been obvious for a person having ordinary skill in the art to utilize UPnP (various versions include MHS and Home network version) in one of the networks. UPnP (both the Home network and MHS versions) is desirable because it allows devices to connect seamlessly.

*Regarding claim 27*, Rune teaches the apparatus according to claim 25, wherein the processor is configured to prevent transmission of universal plug and play discovery multicast message to the first device, and the apparatus is configured to forward at least the broadcast messages relating to the address definition to the

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first device. However, Vasisht teaches using UPnP in one of the networks [paragraph 0051 line 24]. It would have been obvious for a person having ordinary skill in the art to utilize UPnP (various versions include MHS and Home network version) in one of the networks. UPnP (both the Home network and MHS versions) is desirable because it allows devices to connect seamlessly.

*Regarding claim 30*, Rune teaches the apparatus according to claim 29 wherein the processor is configured to prevent transmission of universal plug and play discovery multicast messages to the first device. However, Vasisht teaches using UPnP in one of the networks [paragraph 0051 line 24]. It would have been obvious for a person having ordinary skill in the art to utilize UPnP (various versions include MHS and Home network version) in one of the networks. UPnP (both the Home network and MHS versions) is desirable because it allows devices to connect seamlessly.

*Regarding claim 33*, Rune teaches a computer readable storage medium according to claim 32, wherein the computer program is further configured to control the processor to prevent transmission of universal plug and play discovery multicast messages to the first device. However, Vasisht teaches using UPnP in one of the networks [paragraph 0051 line 24]. It would have been obvious for a person having ordinary skill in the art to utilize UPnP (various versions include

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MHS and Home network version) in one of the networks. UPnP (both the Home network and MHS versions) is desirable because it allows devices to connect seamlessly.

3. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rune as applied to claims 16,18,21,22,25,28,29,31,32,34 and 35 above, and further in view of Tung (US 2006/0136562 A1) (herein after Tung).

*Regarding claim 36*, Rune teaches the apparatus according to claim 22 as discussed above. However, Rune does not explicitly teach the processor is configured to check whether the first device is in sleep mode and, when the first device is in sleep mode, the processor is configured to wake up the first device before transmitting a message to the first device. However, Tung in the same field of endeavor teaches a network node such as a multimedia server that operates in sleep mode and is only activated when receiving a request [see **paragraph 0006 and paragraph 0002**]. It would have been obvious for a person having ordinary skill in the art, at the time of the invention, to check whether the nodes in Rune are in sleep mode and when it is in sleep mode wake up the node before transmitting a message to the server. This is desirable because it provides for power savings.

***Response to Arguments***

4. Applicant's arguments with respect to claims 16-36 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SORI A. AGA whose telephone number is (571)270-1868. The examiner can normally be reached on M-F 7:30-4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on (571)272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. A. A./  
Examiner, Art Unit 2476

/Salman Ahmed/  
Primary Examiner, Art Unit 2476